

PATENT APPLICATION

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Claim 1. (Amended) Method for in-situ modernization of a heterogeneous synthesis reactor, including an external shell comprising at least a catalytic bed (6) [of the radial or axial-radial type,] provided with [opposite] a gas inlet perforated cylindrical [walls] wall and a gas outlet perforated cylindrical wall [for the inlet and outlet (7, 8) of gases], said method comprising the steps of:

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[-] providing an unperforated cylindrical wall (15) coaxial to said gas outlet wall (8) in said catalytic bed (6), said unperforated cylindrical wall (15) extending from an upper end (8a) of said gas outlet wall (8) for a portion of the same of a prefixed length, so as to define a free-space (16) between the gas outlet wall (8) and the unperforated wall (15), for the passage of a part of the gas leaving said catalytic bed (6);

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[-] [providing] providing means [of] for closing an upper end of said free-space (16) between the unperforated wall (15) and the gas outlet wall (8), in proximity of the upper end (8a) of the [latter] wall 8, preventing thereby a bypass of said catalytic bed or a recycling to the [same] catalytic bed of the gas entering [respectively] and leaving the reactor, respectively.

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Claim 5. (Amended) Method according to claim 4, wherein said